



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

*[Handwritten signature]*

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,768	11/15/2001	W. Stephen G. Mann		7886

7590 07/17/2003  
W. Stephen G. Mann  
Suite 701  
284 Bloor Street West  
Toronto, ON M5S 3B8  
CANADA

EXAMINER

YE, LIN

ART UNIT	PAPER NUMBER
----------	--------------

2612

DATE MAILED: 07/17/2003

*[Handwritten number 3]*

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/987,768

Applicant(s)

MANN, W. STEPHEN G.

Examiner

Lin Ye

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Priority*

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in 09/421938 on 10/21/99. It is noted, however, that applicant has not filed a certified copy of the Canada 2,248,473, Canada 2,256,922, Canada 2,264,973, Canada 2,280,022, Canada 2,256,918 and Canada 2,316,098 applications as required by 35 U.S.C. 119(b).

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4 and 50 are rejected under 35 U.S.C. 102(e) as being anticipated by Beller et al. U.S. Patent 6,046,712.

Referring to claim 1, the Beller reference discloses in Figures 1-2, A photographer's assistant system where said system includes a head-worn display (head mounted communications system 10) means where said display (14) means is responsive to the output of a camera (15) fixed in the immediate vicinity of the

Art Unit: 2612

wearer of said display means, and where said system further includes a scene aremac (optics 16 projects image to be superimposed on the real world), where said scene aremac is fixed in the immediate vicinity of the wearer of said display means (See Col. 4, lines 18-38).

Referring to claim 2, the Beller reference discloses where said camera (15) and said scene aremac (16) share a common effective center of projection (25) as shown in Figure 1.

Referring to claim 3, the Beller reference discloses where said scene aremac (16) is responsive to a remote entity (remote system 13) as shown in Figure 1 (See Col. 4, lines 18-22).

Referring to claim 4, the Beller reference discloses where said scene aremac is responsive to a telepointer operated by an individual at a remote location.

Referring to claim 50, the Beller reference discloses in Figures 1-2, telepointing means, where said telepointing means includes a camera (15), a motion stabilizer, a motion restorer (controller 88 includes microprocessor 90 and memory 86, it can send /receive the stabilized – processed video signal to/from the remote system 13. This can be considered as motion stabilizer and restorer. See Col. 6, lines 53-64 and Col. 8, lines 19-24) and aremac (16).

4. Claims 16-29 and 38-48 are rejected under 35 U.S.C. 102(e) as being anticipated by Splitzer et al. U.S. Patent 6,349,001.

Art Unit: 2612

Referring to claim 16, the Splitzer reference discloses in Figures 4, 8-10 and 21, An EyeTap aremac (720 in Figures 9-10) where said EyeTap aremac includes a point source of light (backlight), a spatial light modulator (display 720), and optics (beamsplitter) where said optics form an image of said point source of light in the lens (724) of an eye of the user of said EyeTap aremac, and where said spatial light modulator is responsive to a video input signal (from image sensor or camera).

Referring to claim 17, the Splitzer reference discloses where said EyeTap aremac is wearable.

Referring to claim 18, the Splitzer reference discloses where said EyeTap aremac is responsive to a signal from a remote director (See Col. 9, lines 6-25 and Col. 12, lines 11-16).

Referring to claims 19-20, the Splitzer reference discloses further including means of positioning said EyeTap with respect to said eye to prevent higher diffractive orders from entering said eye, other than that central brightest zeroth order (a polarization beam splitting coating 295 used to prevent higher diffractive orders from entering eye, See Col. 5, lines 15-20).

Referring to claim 21, the Splitzer reference discloses further including a camera (CCD or CMOS sensor 726).

Referring to claim 22, the Splitzer reference discloses where said EyeTap aremac is responsive to a signal from a remote director, where said remote director may view a display medium responsive to said camera as shown in Figure 21 (See Col. 12, lines 9-16).

Art Unit: 2612

Referring to claim 23, the Splitzer reference discloses including camera EyeTapping means (eyeglasses display, where it can direct light into an eye of the wearer of the apparatus).

Referring to claim 24, the Splitzer reference discloses further including camera EyeTapping means where said EyeTap aremac displays a signal indicative of the spatial variation in exposure across the image of the camera providing said camera EyeTapping means as shown in Figure 21.

Referring to claim 25, the Splitzer reference discloses where said EyeTap aremac is head-mountable (eyeglass display).

Referring to claim 26, the Splitzer reference discloses where said EyeTap aremac is built into eyeglasses as shown in Figure 10.

Referring to claim 27-29, the Splitzer reference discloses where said optics (dichroic beamsplitter) is built into a lens of a pair of said eyeglasses in Figure 10 (See Col. 5, lines 11-16).

Referring to claims 38-39, the Splitzer reference discloses a wearable camera system including camera and body-worn recording means, where said wearable camera system further includes camera EyeTapping means as shown in Figures 9-10 (directs light onto the retina of an eye of the wearer).

Referring to claim 40, the Splitzer reference discloses all subject matter as discussed with respected to same comment as with claim 22.

Referring to claim 41, the Splitzer reference discloses all subject matter as discussed with respected to same comment as with claim 28.

Art Unit: 2612

Referring to claim 42, the Splitzer reference discloses all subject matter as discussed with respect to same comment as with claim 23.

Referring to claim 43, the Splitzer reference discloses in Figures 1, 4, 8-10 and 21, a camera (726), spatial light modulator (display 720), and diverter (beamsplitter), where said wearable camera system includes camera EyeTapping means (direct light onto the retina of an eye of the wearer).

Referring to claim 44, the Splitzer reference discloses where said spatial light modulator (display 720) is responsive to a video signal derived from said camera (726).

Referring to claim 45, the Splitzer reference discloses where said spatial light modulator is responsive to a video signal derived from a director at a remote location, and where said director has means of display responsive to an output of said camera as shown in Figure 21 (See Col. 12, lines 9-16).

Referring to claim 46, the Splitzer reference discloses where said spatial light modulator is responsive to a video signal from a remote entity, where said remote entity is responsive to a video signal derived from said camera as shown in Figure 21 (See Col. 12, lines 9-16).

Referring to claim 47, the Splitzer reference discloses where said remote entity is intelligence collective (surveillance system, see Col. 11, 58-66).

Referring to claim 48, the Splitzer reference discloses where said remote entity includes a person operating a telepointer where said telepointer includes the display of said video signal as shown in Figure 21 (See Col. 11, lines 42-57).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5-12 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beller et al. U.S. Patent 6,046,712 in view of Hansen U.S. Patent 6,275,214.

Referring to claim 5, 11, 12 and 49, the Beller reference discloses all subject matter as discussed in respected claim 1, the reference also shows the remote system 13 (other conferee) has screen (19) displaying an image from said camera (15); a stylus (23) can point and mark the display by drawing circles, arrows, etc.; a touch panel (scammer) determines the location upon said screen where a stylus is pointing (See Col. 3, lines 65-67 and Col. 4, lines 1-5). The aremac (16) in system 10 (first conferee) can project an image of the visual information received from the remote system (13). But the Beller reference does not explicitly state the remote system (13) has a projector to project the image to the large screen; a laser pointer is pointing (marking) on the screen instead of using stylus or keyboard.

The Hansen reference discloses in Figure 1, a remote system (second or other conferee) has laser pointer (24) to point the screen (16) for generating a external cursor (22); a scanner (camera 14) detect the presence of a laser pointer aimed at said screen, to determine the coordinates where on said screen said laser pointer (external



Art Unit: 2612

cursor) is pointing for generating a command for the computer (See Col. 3, lines 40-60). The Hasen reference is an evidence that one of ordinary skill in the art at the time to see more advantages for the remote system has laser pointer to point the projected screen so that providing a simple remote user interface for a plurality conferees to view the larger display screen in the same time. For that reason, it would have been obvious to see the remote system (13) has a projector to project the image to the large screen; a laser pointer is pointing (marking) on the screen disclosed by Beller.

Referring to claim 6, the Hansen reference discloses further includes means for determining the coordinates of said blob of light upon said screen as shown in Figures 2-3.

Referring to claim 7, the Beller reference discloses where said director's assistant system (remote system) further includes means for driving said scene aremac (16) where said means for driving said scene aremac is responsive to said coordinates (marked by a stylus 23).

Referring to claims 8-10, the Hansen and Beller references discloses all subject matter as discussed with respected to same comment as with claims 1 and 5.

7. Claims 32-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Splitzer et al. U.S. Patent 6,349,001 in view of Rallison et al. U.S. Patent 5,903,395.

Referring to claims 32-34, the Splitzer reference discloses all subject matter as discussed in respected claim 16, except the reference does not explicitly states the point source of light (backlight source) is a light emitting laser diode.

The Rallison reference discloses in Figures 1 and 14B, a head-mounted visual display (EyeTap aremac) device has the point source using light emitting laser diode to the eye of user for providing a high-density color image (See Col. 5, lines 40-43 and 40-45). The Rallison reference is an evidence that one of ordinary skill in the art at the time to see more advantages for the EyeTap aremac using a light emitting diode to direct the image light to the eye of user so that providing low cost, lightweight, comfortable display to the user. For that reason, it would have been obvious to see the point source of light is a light emitting laser diode disclosed by Splitzer.

Referring to claims 35, the Rallison reference discloses said light emitting diode is a laser diode and where said spatial light modulator is an LCD panel, and where said LCD panel is oriented so that the polarization orientation of the side facing said light emitting diode matches the polarization of said light emitting diode (See Col. 9, lines 39-46).

Referring to claims 36, the Rallison reference discloses where said spatial light modulator (LCD) is not square but has rectangular shape and where said laser diode is oriented with major axis of light output aligned along the length of said rectangular shape and where said laser diode is oriented with minor axis of light output along the width of said rectangular shape (See Col. 9, lines 9-16).

Referring to claim 37, the Splitzer reference discloses all subject matter as discussed with respected to same comment as with claim 29.

Art Unit: 2612

***Allowable Subject Matter***

8. Claims 13-15 are objected to as being dependent upon a rejected base claim 12, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
9. Claims 30-31 are objected to as being dependent upon a rejected base claims 16-17, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Double Patenting***

10. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

11. Claims 1-50 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-50 of copending Application No. 09421938. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Referring to claims 1-50 of both cases (Application No. 09421938 and Application No. 09987768) are the same invention.

Art Unit: 2612

***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Horiuchi et al. U.S. 6,304,234 discloses an information processing apparatus is provided which includes an information /data display for displaying the information/data on an ocular basis.
- b. Kosugi et al. U.S. 6,483,483 discloses an eyeglass type image display apparatus can be connected to a computer having a large amount of information.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Lin Ye** whose telephone number is **(703) 305-3250**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy R Garber can be reached on (703) 305-4929.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, DC. 20231

Or faxed to:


(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal drive, Arlington, VA., Sixth Floor (Receptionist).

Art Unit: 2612

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Lin Ye  
July 10, 2003

  
WENDY R. GARBER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600